

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 May 2002 (23.05.2002)

PCT

(10) International Publication Number
WO 02/41112 A2

(51) International Patent Classification⁷:

G06F

(74) Agents: RITCHIE, David, B. et al.; Thelen Reid & Priest, LLP, P.O Box 640640, San Jose, CA 95164-0640 (US).

(21) International Application Number:

PCT/US01/45794

(22) International Filing Date:

14 November 2001 (14.11.2001)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/249,671 17 November 2000 (17.11.2000) US

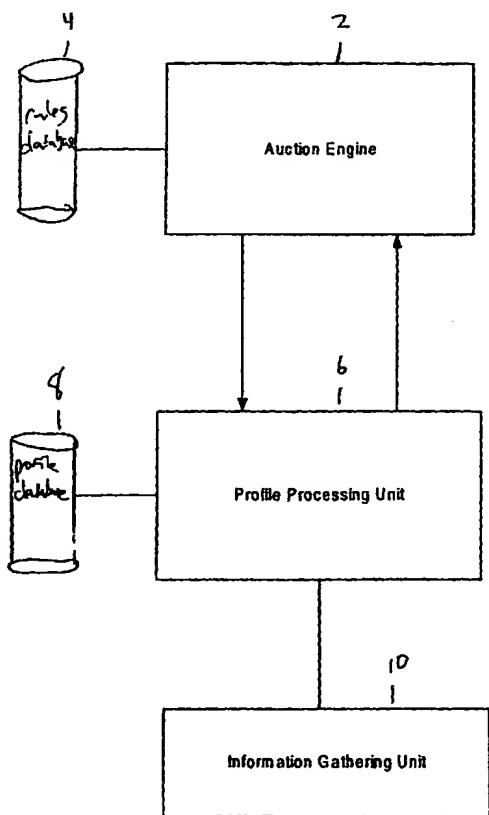
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant: COMMERCE ONE [US/US]; 4440 Rosewood Drive, Pleasanton, CA 94588 (US).

(72) Inventor: RAMESH, Balwani; 3420 Broderick Street, San Francisco, CA 94123 (US).

[Continued on next page]

(54) Title: PROFILE-BASED PRICING



(57) Abstract: Dynamically updated profiles for an initiator and/or one or more bidders in an online auction allows pricing or other auction variables to be altered during or after an auction to be adjusted based on information gathered with regard to one or more profile fields in the profiles. Additionally, limits can be dynamically set as to who can participate in an auction using the information in the profiles. Multi-variable bidding may be accomplished by applying weights to certain variables at the end of an auction along with any modifications outlined in any relevant profile fields in order to determine a winner or winners of the auction.

WO 02/41112 A2



Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

S P E C I F I C A T I O N

TITLE OF THE INVENTION

PROFILE-BASED PRICING

CROSS REFERENCE TO RELATED APPLICATION

This application claims priority based on Provisional Application Serial No. 60/249,671, entitled, "Profile-Based Pricing", filed on November 17, 2000, by Ramesh Balwani.

FIELD OF THE INVENTION

The present invention relates to the field of Internet-based auctions. More specifically, the present invention relates to profile-based pricing in an Internet-based auction.

BACKGROUND OF THE INVENTION

Internet auctions have exploded into one of the most popular forms of electronic commerce (e-commerce) on the Internet. Online auctions began with individuals selling personal items to other individuals but in recent years there has been a dramatic rise in the number of business-to-business (B2B) auctions conducted via the Internet. A process that once required laborious paperwork and endless committees within a company has now been outsourced to a web site which does most of the leg work.

B2B auctions typically have different parameters than non-business auctions. They normally involve a large number of goods and a great deal more money. There are also special business needs which must be accounted for, such as the reluctance of many

companies to do business with brand new companies that have no track record with regard to delivery or payment reliability. Thus, typically business-to-business auctions have been non-binding or only partially binding, thus allowing the seller or buyer to back out if the ultimate "winner" of the auction is not satisfactory to him.

Additionally, in the past, businesses have altered the "rules" governing whom they sell goods to and how they sell the goods depending on the buyer. For example, a company selling 100,000 units of product A may give 10% off to a certain company in order to make up for a prior shipment in which 1000 of the units shipped turned out to be defective. Alternatively, a company selling 100,000 units of product A may charge 10% more to a company who has been late with its payments in the past.

There currently is no mechanism to integrate these important bits of information into the rules of an Internet auction. Thus, currently B2B auctions are normally non-binding or only partially binding (or limit the field of bidders as to ensure only reputable companies bid). What is needed is a solution which allows for this type of information to be incorporated into the auction itself, thus simplifying the auction process and allowing true online B2B auctions.

BRIEF DESCRIPTION OF THE INVENTION

Dynamically updated profiles for an initiator and/or one or more bidders in an online auction allows pricing or other auction variables to be altered during or after an auction to be adjusted based on information gathered with regard to one or more profile fields in the profiles. Additionally, limits can be dynamically set as to who can participate in an auction using the information in the profiles. Multi-variable bidding may be accomplished by applying weights to certain variables at the end of an auction along with any modifications outlined in any relevant profile fields in order to determine a winner or winners of the auction.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram illustrating a web-based auction system in accordance with a specific embodiment of the present invention.

FIG. 2 is a flow diagram illustrating a method for providing profile-based pricing in an online auction, said online auction having one or more bidders and an initiator in accordance with a specific embodiment of the present invention.

FIG. 3 is a block diagram illustrating an apparatus for providing profile-based pricing in an online auction, said online auction having one or more bidders and an initiator in accordance with a specific embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

In the following description, a preferred embodiment of the invention is described with regard to preferred process steps and data structures. However, those skilled in the art will recognize, after perusal of this application, that embodiments of the invention may be implemented using at least one general purpose computer operating under program control, and that modification of the general purpose computer to implement the components, process steps, and/or data structures described herein would not require undue invention.

The present invention utilizes dynamically updated profiles in an auction system in order to allow auctions to incorporate additional factors into its rules. FIG. 1 is a block diagram illustrating a web-based auction system in accordance with a specific embodiment of the present invention. The Auction engine 2 executes rules stored in a rules database 4. The rules indicate how the auction is to be run. Examples of rules that may be defined in the rules database include the length of the auction, the type of the auction, and how the winner is determined.

In auctions, there is generally one party who initiates the auction process. In traditional auction, this is generally the seller, who places a good or service up for auction, at which point one or more buyers bid on the good or service. However, given the large variety of auction models, this initiator may not be a seller. Reverse auctions have gained in popularity in recent years so it is quite possible now to have the initiator of the auction be a potential buyer rather than a seller. Additionally, it is also conceivable that there may be auctions where there are both multiple sellers and multiple buyers participating. For purposes of this specification, the term initiator will be used to represent the party that controls the rules of the auctions. Thus, while in traditional auctions the initiator may be limited to a single buyer, for purposes of this specification, the initiator may be a buyer, a seller, or multiple buyers or sellers.

Before, after, or during the auction it may be necessary to alter the auction based on profiles for the buyer or seller. A profile processing unit 6 accesses a profile database 8 to retrieve appropriate profiles for the auction. The profiles need not have any specific format or include any particular fields. Hence, they can be dynamically altered to change information, or add or remove fields. Profiles may be stored for either sellers or buyers or both. Additionally, profiles may be stored on corporations on top of individuals. For example, there may be multiple parties within a large corporation that bid on parts using an auction system (an automobile manufacturer may use a separate buyer for brake pads as for tires). Thus profiles may be stored for each buyer within the corporation and/or the corporation itself (covering all the buyers within the corporation).

The profile processing unit 6 is coupled to an information collection unit 10. The information collection unit 10 gathers information relevant to the profile. In a first embodiment of the present invention, the information collection unit 10 gathers information as to the percentage of time the companies having profiles are on-time in either payments or delivery (depending on whether they are buyers or sellers, respectively). In a second embodiment of the present invention, the information collection unit 10 gathers information as to how good the company is at supplying certain countries.

The profiles may then be created by combining generalized rules for the auction from the rules database 4 with information gathered by the information collection unit. In a first embodiment of the present invention, there is a rule in the rules database indicating how bidders are treated based on the percentage of time they are on time in either payments or deliveries. For example, the rule may indicate that only companies who have an 80% on time rate are allowed to bid.

Another example is that the rule may indicate that companies who have less than an 80% on time rate must pay 5% more for goods. Thus, the profile for a company with less than an 80% on time rate would contain a field indicating that they must pay 5% more for goods. One of the main advantages of the present invention is that it is dynamic. Thus, the information collection unit is constantly gathering data on company performance. Therefore, as soon as the company rises above an 80% on time rate, their profile would dynamically change and immediately their 5% penalty would be removed.

Another possibility is to lower the price of the items being bid on if there are more bidders. This is especially helpful for auctions in which a seller has access a great many identical items for sale. The seller may then be able to get quantity discounts from his supplier if there are enough bidders. Thus, for example, the price could be reduced by 5% after the number of bidders reaches 1,000, by 20% after the number of bidders reaches 10,000, etc.

The profiles may also be used to implement multi-variable auctions. Auctions typically have only one variable: the price of the bid. The profiles, however, allow a seller to assign weights to a number of different variables. Thus, determining the winner of the auction may be more complex than simply looking at who bid the highest (or lowest in the case of reverse auctions). Variables such as quantity of good bid on, location of the bidder, type of payment, etc. may all be factored into a "smart" auction process.

FIG. 2 is a flow diagram illustrating a method for providing profile-based pricing in an online auction, said online auction having one or more bidders and an initiator in

accordance with a specific embodiment of the present invention. At 50, a set of rules governing said online auction is retrieved from a rules database, said rules including at least one rule involving a profile field. The profiles may correspond to individual buyers or sellers, or even multiple buyers or sellers within a single corporation. At 52, profiles for said initiator and for each of said bidders are accessed from a profile database, each of said profiles having one or more profile fields. At 54, information is gathered regarding said initiator or said one or more bidders with regard to one of said one or more profile fields in said profiles by using an information collection unit. Types of possible information include the percentage of time one or more companies is on-time in payments, percentage of time one or more companies is on-time in deliveries, how good one or more companies are at supplying certain countries, and how many items one or more companies is bidding on. At 56, said one or more profile fields in said profiles are dynamically updated by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction.

FIG. 3 is a block diagram illustrating an apparatus for providing profile-based pricing in an online auction, said online auction having one or more bidders and an initiator in accordance with a specific embodiment of the present invention. An online auction rules retriever 100 coupled to an online auction rules database 102 retrieves a set of rules governing said online auction from the online auction rules database 102, said rules including at least one rule involving a profile field. The profiles may correspond to individual buyers or sellers, or even multiple buyers or sellers within a single corporation. A profile accessor 104 coupled to a profile database 106 accesses profiles for said initiator and for each of said bidders the profile database 106, each of said profiles having one or more profile fields. An information collection unit 108 gathers information regarding said initiator or said one or more bidders with regard to one of said one or more profile fields in said profiles by using an information collection unit. Types of possible information include the percentage of time one or more companies is on-time in payments, percentage of time one or more companies is on-time in deliveries, how good one or more companies are at supplying certain countries, and how many items one or more companies is bidding on. A dynamic profile updater 110 coupled to said

information gathering unit 108, said online auction rules retriever 100 and said profile accessor 104 dynamically updates the one or more profile fields in said profiles using said information gathered from said information collection unit 108 and combining it with one or more rules from said set of rules governing said online auction.

A bidder excluder 112 coupled to the dynamic profile updater 110 and the information gathering unit 108 may exclude certain bidders based upon information in their profiles, such as excluding all bidders whose on-time percentage is less than 80%. A fixed percentage charger 114 coupled to the dynamic profile updater 110 and the information gathering unit 108 may charge a fixed percentage more for any bidder based upon information in their profiles, such as charging 5% more to all bidders whose on-time percentage is less than 80%. An auction executor 116 coupled to the dynamic profile updater 110 and the information gathering unit 112 may execute the auction using a variable weighter 118 to apply weights to corresponding variables and a profile field/variable weight combiners 120 to compute the results along with any modifications outlined in any relevant profile fields at the close of the auction in order to determine a winner or winners of the auction. This allows for multi-variable bidding.

While embodiments and applications of this invention have been shown and described, it would be apparent to those skilled in the art having the benefit of this disclosure that many more modifications than mentioned above are possible without departing from the inventive concepts herein. The invention, therefore, is not to be restricted except in the spirit of the appended claims.

CLAIMS

What is claimed is:

1. A method for providing profile-based pricing in an online auction, said online auction having one or more bidders and an initiator, including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said initiator and for each of said bidders from a profile database, each of said profiles having one or more profile fields;

gathering information regarding said initiator or said one or more bidders with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction.

2. The method of claim 1, wherein one of said profiles corresponds to multiple bidders within a single corporation.

3. The method of claim 1, wherein said information is the percentage of time one or more companies is on-time in payments.

4. The method of claim 1, wherein said information is the percentage of time one or more companies is on-time in deliveries.

5. The method of claim 1, wherein said information is how good one or more companies are at supplying certain countries.

6. The method of claim 1, wherein said information is how many items one or more companies is currently bidding on.

7. The method of claim 3, further including excluding any bidders whose on-time percentage is below a predefined level.

8. The method of claim 4, further including excluding any bidders whose on-time percentage is below a predefined level.

9. The method of claim 3, further including charging a fixed percentage more to any bidders whose on-time percentage is below a predefined level.

10. The method of claim 4, further including charging a fixed percentage more to any bidders whose on-time percentage is below a predefined level.

11. A method for determining which of one or more potential bidders may be allowed to participate in an online auction including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for each of said potential bidders from a profile database, each of said profiles having one or more profile fields, one of said profile fields indicating the percentage of time the corresponding bidder has paid on-time;

gathering information regarding said one or more potential bidders with regard to how often said potential bidders have paid on-time in said profiles by using an information collection unit;

dynamically updating said on-time profile field in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction; and

excluding any potential bidders whose on-time percentage as contained in said on-time profile field in said profiles is less than a percentage specified in a profile for an initiator of said auction.

12. A method for providing profile-based pricing in an online auction, said online auction having one or more buyers and a seller, including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said seller and for each of said buyers from a profile database, each of said profiles having one or more profile fields;

gathering information regarding said seller or said one or more buyers with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction.

13. A method for providing profile-based pricing in an online auction, said online auction having one or more buyers and a seller, including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said seller and for each of said buyers from a profile database, each of said profiles having one or more profile fields;

gathering information regarding said seller or said one or more buyers with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction.

14. A method for providing profile-based pricing in an online auction, said online auction having one or more buyers and a seller, including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said seller and for each of said buyers from a profile database, each of said profiles having one or more profile fields, one of said profile fields indicating the percentage of time the corresponding bidder has paid on-time;

gathering information regarding said one or more potential bidders with regard to how often said potential bidders have paid on-time in said profiles by using an information collection unit;

dynamically updating said on-time profile field in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction; and

adding a fixed percentage to the bids of any potential bidders whose on-time percentage as contained in said on-time profile field in said profiles is less than a percentage specified in a profile for an initiator of said auction.

15. A method for providing a multi-variable online auction, said online auction having one or more bidders and an initiator, including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said initiator and for each of said bidders from a profile database, each of said profiles having one or more profile fields, said profile for the initiator having weights assigned to each of one or more variables;

gathering information regarding said initiator or said one or more bidders with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction;

executing the auction by applying said weights to corresponding variables and computing the results along with any modifications outlined in any relevant profile fields at the close of the auction in order to determine a winner or winners of the auction.

16. An apparatus for providing profile-based pricing in an online auction, said online auction having one or more bidders and an initiator, including:

an online auction rules database;

an online auction rules retriever coupled to said online auction rules database;

a profile database;

a profile accessor coupled to said profile database;
an information gathering unit coupled to said online auction rules retriever; and
a dynamic profile updater coupled to said online auction rules retriever, said
profile accessor, and said online auction rules retriever.

17. The apparatus of claim 16, further including a fixed percentage charger
coupled to said information gathering unit and to said dynamic profile updater.

18. The apparatus of claim 16, further including a bidder excluder coupled to
said information gathering unit and to said dynamic profile updater.

19. An apparatus for determining which of one or more potential bidders may
be allowed to participate in an online auction including:

an online auction rules database;
an online auction rules retriever coupled to said online auction rules database;
a profile database;
a profile accessor coupled to said profile database;
an information gathering unit coupled to said online auction rules retriever;
a dynamic profile updater coupled to said online auction rules retriever, said
profile accessor, and said online auction rules retriever; and
a bidder excluder coupled to said information gathering unit and to said dynamic
profile updater.

20. An apparatus for providing a multi-variable online auction, said online
auction having one or more bidders and an initiator, including:

an online auction rules database;
an online auction rules retriever coupled to said online auction rules database;
a profile database;
a profile accessor coupled to said profile database;
an information gathering unit coupled to said online auction rules retriever;
a dynamic profile updater coupled to said online auction rules retriever, said
profile accessor, and said online auction rules retriever; and

an auction executor coupled to said information gathering unit and to said dynamic profile updater; said auction executor including a variable weighter coupled to a profile field/variable weight combiner.

21. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine for providing profile-based pricing in an online auction, said online auction having one or more bidders and an initiator, the method including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said initiator and for each of said bidders from a profile database, each of said profiles having one or more profile fields;

gathering information regarding said initiator or said one or more bidders with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction.

22. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine for determining which of one or more potential bidders may be allowed to participate in an online auction, the method including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for each of said potential bidders from a profile database, each of said profiles having one or more profile fields, one of said profile fields indicating the percentage of time the corresponding bidder has paid on-time;

gathering information regarding said one or more potential bidders with regard to how often said potential bidders have paid on-time in said profiles by using an information collection unit;

dynamically updating said on-time profile field in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction; and

excluding any potential bidders whose on-time percentage as contained in said on-time profile field in said profiles is less than a percentage specified in a profile for an initiator of said auction.

23. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine for providing profile-based pricing in an online auction, said online auction having one or more buyers and a seller, the method including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said seller and for each of said buyers from a profile database, each of said profiles having one or more profile fields;

gathering information regarding said seller or said one or more buyers with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction.

24. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine for providing profile-based pricing in an online auction, said online auction having one or more buyers and a seller, the method including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said seller and for each of said buyers from a profile database, each of said profiles having one or more profile fields;

gathering information regarding said seller or said one or more buyers with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction.

25. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine for providing profile-based pricing in an online auction, said online auction having one or more buyers and a seller, the method including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said seller and for each of said buyers from a profile database, each of said profiles having one or more profile fields, one of said profile fields indicating the percentage of time the corresponding bidder has paid on-time;

gathering information regarding said one or more potential bidders with regard to how often said potential bidders have paid on-time in said profiles by using an information collection unit;

dynamically updating said on-time profile field in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction; and

adding a fixed percentage to the bids of any potential bidders whose on-time percentage as contained in said on-time profile field in said profiles is less than a percentage specified in a profile for an initiator of said auction.

26. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine for providing a multi-variable online auction, said online auction having one or more bidders and an initiator, the method including:

retrieving a set of rules governing said online auction from a rules database, said rules including at least one rule involving a profile field;

accessing profiles for said initiator and for each of said bidders from a profile database, each of said profiles having one or more profile fields, said profile for the initiator having weights assigned to each of one or more variables;

gathering information regarding said initiator or said one or more bidders with regard to one of said one or more profile fields in said profiles by using an information collection unit;

dynamically updating said one or more profile fields in said profiles by using said information gathered from said information collection unit and combining it with one or more rules from said set of rules governing said online auction;

executing the auction by applying said weights to corresponding variables and computing the results along with any modifications outlined in any relevant profile fields at the close of the auction in order to determine a winner or winners of the auction.

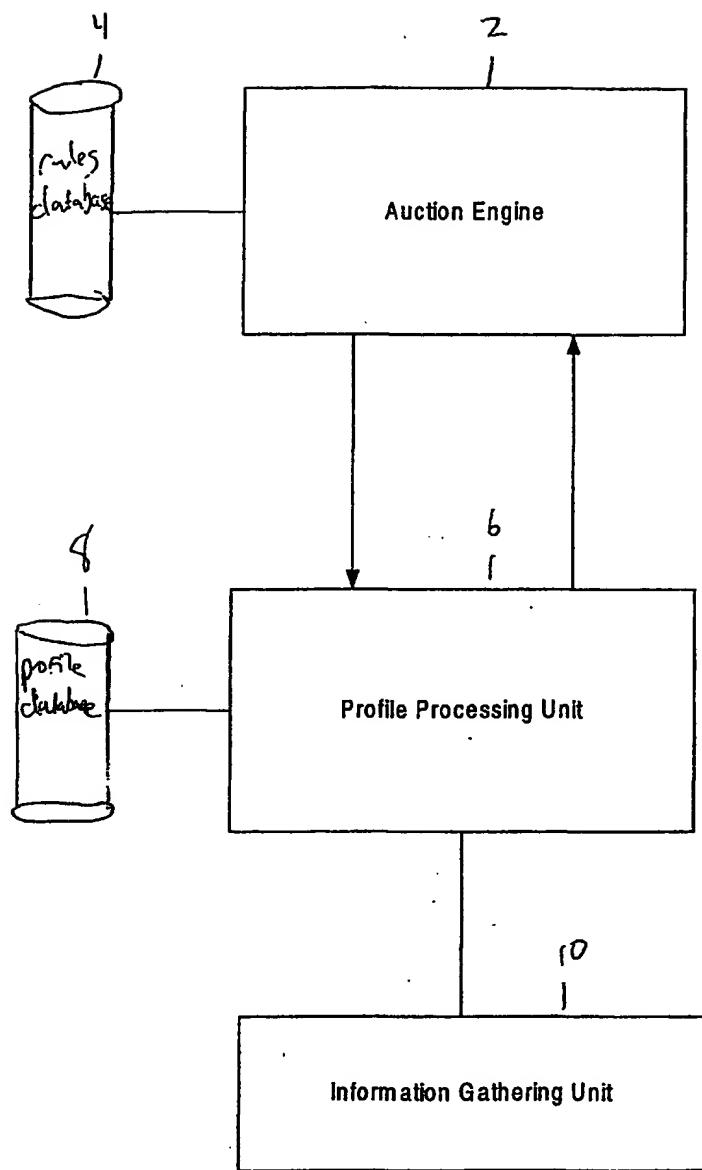
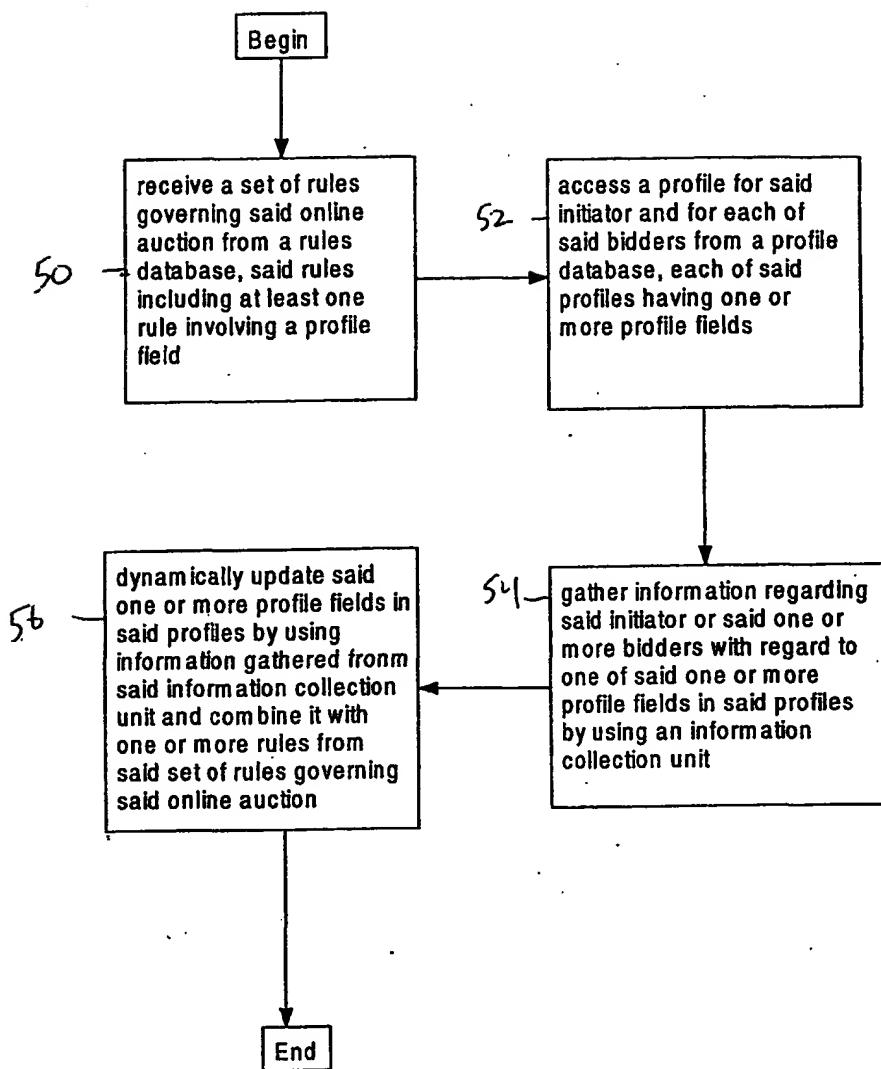


Fig. 1



F16.2

